

§ 1054.103 What exhaust emission standards must my handheld engines meet?

(a) *Emission standards.* Exhaust emissions from your handheld engines may not exceed the emission standards in Table 1 to this section. Measure emissions using the applicable steady-state test procedures described in subpart F of this part.

TABLE 1 TO § 1054.103—PHASE 3 EMISSION STANDARDS FOR HANDHELD ENGINES (g/kW-hr)

Engine displacement class	HC+NO _x	CO
Class III	50	805
Class IV	50	805
Class V	72	603

(b) *Averaging, banking, and trading.* You may generate or use emission credits under the averaging, banking, and trading (ABT) program for HC+NO_x emissions as described in subpart H of this part. You may not generate or use emission credits for CO emissions. To generate or use emission credits, you must specify a family emission limit for each engine family you include in the ABT program. These family emission limits serve as the emission standards for the engine family with respect to all required testing instead of the standards specified in this section. An engine family meets emission standards even if its family emission limit is higher than the standard, as long as you show that the whole averaging set of applicable engine families meets the emission standards using emission credits and the en-

gines within the family meet the family emission limit. The following FEL caps are the maximum values you may specify for family emission limits:

- (1) 336 g/kW-hr for Class III engines.
- (2) 275 g/kW-hr for Class IV engines.
- (3) 186 g/kW-hr for Class V engines.

(c) *Fuel types.* The exhaust emission standards in this section apply for engines using the fuel type on which the engines in the emission family are designed to operate. You must meet the numerical emission standards for hydrocarbons in this section based on the following types of hydrocarbon emissions for engines powered by the following fuels:

- (1) Alcohol-fueled engines: THCE emissions.
- (2) Natural gas-fueled engines: NMHC emissions.
- (3) Other engines: THC emissions.

(d) *Useful life.* Your engines must meet the exhaust emission standards in paragraph (a) of this section over their full useful life as described in § 1054.107.

(e) *Applicability for testing.* The emission standards in this subpart apply to all testing, including certification, production-line, and in-use testing.

§ 1054.105 What exhaust emission standards must my nonhandheld engines meet?

(a) *Emission standards.* Exhaust emissions from your engines may not exceed the emission standards in Table 1 to this section. Measure emissions using the applicable steady-state test procedures described in subpart F of this part.

TABLE 1 TO § 1054.105—PHASE 3 EMISSION STANDARDS FOR NONHANDHELD ENGINES (g/kW-hr)

Engine displacement class	HC+NO _x	Primary CO standard	CO standard for marine generator engines
Class I	10.0	610	5.0
Class II	8.0	610	5.0

(b) *Averaging, banking, and trading.* You may generate or use emission credits under the averaging, banking, and trading (ABT) program for HC+NO_x emissions as described in subpart H of this part. You may not generate or use emission credits for CO

emissions. To generate or use emission credits, you must specify a family emission limit for each engine family you include in the ABT program. These family emission limits serve as the emission standards for the engine family with respect to all required testing

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instead of the standards specified in this section. An engine family meets emission standards even if its family emission limit is higher than the standard, as long as you show that the whole averaging set of applicable engine families meets the emission standards using emission credits, and the engines within the family meet the family emission limit. The following FEL caps are the maximum values you may specify for family emission limits:

(1) 40.0 g/kW-hr for Class I engines with displacement below 100 cc.

(2) 16.1 g/kW-hr for Class I engines with displacement at or above 100 cc.

(3) 12.1 for Class II engines.

(c) *Fuel types.* The exhaust emission standards in this section apply for engines using the fuel type on which the engines in the emission family are designed to operate. You must meet the numerical emission standards for hydrocarbons in this section based on the following types of hydrocarbon emissions for engines powered by the following fuels:

(1) Alcohol-fueled engines: THCE emissions.

(2) Natural gas-fueled engines: NMHC emissions.

(3) Other engines: THC emissions.

(d) *Useful life.* Your engines must meet the exhaust emission standards in

paragraph (a) of this section over their full useful life as described in §1054.107.

(e) *Applicability for testing.* The emission standards in this subpart apply to all testing, including certification, production-line, and in-use testing.

§ 1054.107 What is the useful life period for meeting exhaust emission standards?

This section describes an engine family's useful life, which is the period during which engines are required to comply with all emission standards that apply. The useful life period is five years or a number of hours of operation, whichever comes first, as described in this section.

(a) Determine the useful life period for exhaust requirements as follows:

(1) Except as specified in paragraphs (a)(2) and (3) of this section, the useful life period for exhaust requirements is the number of engine operating hours from Table 1 to this section that most closely matches the expected median in-use life of your engines. The median in-use life of your engine is the shorter of the following values:

(i) The median in-use life of equipment into which the engine is expected to be installed.

(ii) The median in-use life of the engine without being scrapped or rebuilt.

TABLE 1 TO § 1054.107—NOMINAL USEFUL LIFE PERIODS

Nonhandheld			
	Residential	Extended life residential ¹	Commercial
Class I	125	250	500
Class II	250	500	1,000
Handheld			
	Light use	Medium use	Heavy use
Class III—V	50	125	300

¹ Or "General Purpose."

(2) You may select a longer useful life for nonhandheld engines than that specified in paragraph (a)(1) of this section in 100-hour increments not to exceed 3,000 hours for Class I engines or 5,000 hours for Class II engines. For engine families generating emission credits, you may do this only with our approval. These are considered "Heavy Commercial" engines.

(3) The minimum useful life period for engines with maximum engine power above 19 kW is 1,000 hours (see §1054.1(d)).

(b) Keep any available information to support your selection and make it available to us if we ask for it. We may require you to certify to a different useful life value from the table if we determine that the selected useful life